

REMARKS

By this amendment, applicants have amended the specification to delete reference therein to the claims and to insert appropriate headings therein. Applicants have also added an abstract on a separate sheet, as required by the Examiner. Claim 5 has also been amended to eliminate the indefiniteness problem noted by the Examiner in numbered section 4 of the office action. Applicants have added dependent claim 15 to further define the additional shaped elements set forth in claim 5.

In view of the addition of the abstract and the insertion of the headings in the specification, it is submitted the disclosure is in proper form.

In view of the foregoing amendment to claim 5, it is submitted claims 5 and 6 comply with the requirements of 35 USC 112, second paragraph. Therefore, reconsideration and withdrawal of the rejection of claims 5 and 6 under 35 USC 112, second paragraph, are requested.

Claims 1 - 3, 8, 11 and 14 stand rejected under 35 USC 102(b) as allegedly being anticipated by United States Patent No. 4,829,950 to Kanamaru et al. Claims 4 - 7, 9, 10, 12 and 13 stand rejected under 35 USC 103(a) as being unpatentable over Kanamaru et al. Applicants traverse these rejections and request reconsideration thereof.

The present invention relates to a method for increasing the wear resistance of a work piece. According to the present invention, the work piece is connected to a core material that cannot be reshaped and which is of a greater hardness than the work piece material. According to the present invention, the core material is connected to the work piece in a form-fitting manner by means of cold-extrusion or hot-extrusion of the work piece material.

In complete contrast to the present invention, the patent to Kanamaru et al discloses a valve lifter and a method for producing the valve lifter, but does not disclose a method for connecting a core material to a work piece. Contrary to the allegations in the office action, the patent to Kanamaru et al does not disclose forming a core-disk member 19 to a work piece 21. Rather, reference numeral 19 in Figure 5A is a disk made of an alloy tool steel which provides the starting material for forming the valve lifter. By the cold backward extrusion step shown in Figure 5B, the disk 19 is itself formed into a bottom-equipped cylindrical blank 21. See, column 5, lines 7 - 13 of Kanamaru et al. Thus, it appears the cylindrical blank 21 is formed from the disk 19, but is not a separate piece joined thereto, as alleged in the office action. That is, the cold backward extrusion described in Kanamaru et al converts the disk 19 into the cylindrical blank 21. Reference numerals 19 and 21 refer to the same material before and after, respectively, cold backward extrusion. Therefore, the patent to Kanamaru et al is completely inapposite to the present invention in which the work piece is connected to a core material that cannot be reshaped by cold or hot extrusion of the work piece material. Since the present invention is not disclosed and would not have been suggested by Kanamaru et al, the presently claimed invention is patentable over Kanamaru et al.

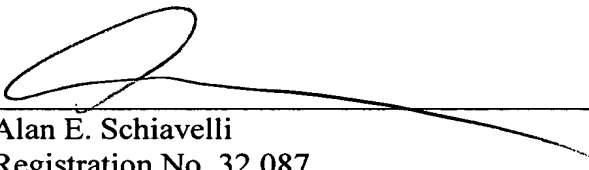
Applicants note the Examiner has cited a number of additional patents as being pertinent to applicants' disclosure. However, since these patents were not applied in rejecting claims formerly in the application, further discussion of these patents is deemed unnecessary.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 306.38372X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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REWRITTEN MARKED UP COPY

Page 1, amend the paragraph beginning on line 35 to read as follows.

The underlying object of the invention is to improve a method for increasing the wear resistance of a work piece ~~in accordance with the preamble of claim 1~~ in such a way that an extremely durable connection of the core material to the work piece is achieved with simple means and in a less expensive manner. In so doing, the dimensions of the work piece are to be maintained.

IN THE CLAIMS:

5. (Amended) Method according to claim 1, characterised in that the core material (2) has additional shaped elements ~~such as, for example, rounded-off notches and/or areas or hollow spaces and/or undercuts.~~